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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,703	01/19/2005	Maarten Kuijper	NL 020731	.2633

24737 7590 01/15/2008
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

HEYI, HENOK G

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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01/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/521,703

Applicant(s)

KUIJPER ET AL.

Examiner

Henok G. Heyi

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5 and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Takashi et al. EP 1143432 A2 (Takashi hereinafter).

Regarding claim 1, Takashi teaches an optical medium (see Fig. 3) in which a pre-groove track is embedded between layers of material for generating a tracking signal, characterized in that this material presents a slightly positive, weak variation in the phase between written track and unwritten track (see para [0137] to [0140]) and an average reflection coefficient of an order of magnitude of 0.5 or greater (see Figs. 6-9).

Regarding claim 2, Takashi teaches an optical medium as claimed in claim 1, characterized in that the material is formed by a phase-change material (para [0001]).

Regarding claim 3, Takashi teaches an optical medium as claimed in claim 1, characterized in that the material is formed by a phase-change growth-dominant material (a phase change medium for example an alloy of GeSbTe type which is inherently growth dominant material, see para [0004]).

Regarding claim 4, Takashi teaches an optical medium as claimed in claim 1, characterized in that the material is formed by a phase-change nucleation-dominant

material(a phase change medium for example an alloy of GeSbTe type which is inherently nucleation-dominant material, see para [0004]).

Regarding claim 5, Takashi teaches an optical medium as claimed in claim 1, characterized in that the material is formed by a recordable material (the material for the recording layer of such a phase change medium, a thin film of a chalcogenide alloy is often used, see para [0004]).

Regarding claim 7, Takashi teaches an optical medium as claimed in claim 1, characterized in that the material is formed by a recordable metal-alloy material (see para [0050]).

Regarding claim 8, Takashi teaches an optical medium as claimed in claim 1, characterized in that the material is formed by a recordable phase-change material (see para [0001]).

Regarding claim 9, Takashi teaches an optical medium as claimed in claim 1, in which layers of material are provided (see Fig. 3), characterized in that this material presents a positive phase difference between written track and unwritten track between wavelengths of 0.0 and 0.08 if the average reflection coefficient is between 0.5 and 0.6 (see Figs. 6-9).

Regarding claim 10, Takashi teaches an optical medium as claimed in claim 1 in which layers of material are provided (see Fig. 3), characterized in that this material presents a phase difference between written track and unwritten track wavelengths of -0.0 1 and 0.04 if the average reflection coefficient is greater than 0.6 (see Figs. 6-9).

Regarding claim 11, Takashi teaches an apparatus (see Fig. 4) for reading and/or writing an optical medium, the apparatus comprising an optical head for producing a light beam in the direction of said optical medium and electronic circuits for managing the reading/writing processes (see para [0140]), the apparatus being characterized in that the optical medium is as claimed in claim 1 or 2.

Regarding claim 12, Takashi teaches a method of creating an optical medium as claimed in claim 1 or 2, characterized in that layers are placed on one another (see Fig. 3), and the material and the depth of the groove are chosen such that the optical medium presents a slightly positive weak variation in the phase between written track and unwritten track (see para [0120] to [0122]) and an average reflection coefficient of an order of magnitude of 0.5 or greater (see Figs. 6-9).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takashi in view of Kakuta et al. US 2003/0031954 A1 (Kakuta hereinafter).

Regarding claim 6, Takashi teaches an optical medium as claimed in claim 1, but fails to teach an optical medium characterized in that the material is formed by a recordable dye material. However it is notoriously known in the art to use recordable dye material and to cite a reference Kakuta teaches this well known manufacturing method (see para [0206]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the optical recording medium of Takashi to include the use of dye material as taught by Kakuta above. The modification would have been obvious because the use of dye material is helpful in controlling reflectivity (see para [0066]).

Conclusion

The referenced citations made in the rejection(s) above are intended to exemplify areas in the prior art document(s) in which the examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henok G. Heyi whose telephone number is (571) 270-1816. The examiner can normally be reached on Monday to Friday 8:30 to 6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HGH
Patent Examiner
11/30/2007


TAN DINH
PRIMARY EXAMINER

12/06/07